



Best Practices for Brine Freezing Shrimp

BRINE FREEZING IS A GREAT WAY to quickly freeze shrimp at sea, maintaining premium flavor and freshness when done correctly.

Working Shrimp On Deck

After following recommendations for the SHORTEST possible tow times, and immediately after landing, work one basket at a time: sort, rinse, dip, fill bags or boxes, place in brine tank, then go to the next basket. It is always best to handle shrimp in the shade, and never in full sun.

CULLING & SORTING

Carefully remove & sort premium shrimp into separate baskets and monitor. Do not use a salt box to separate premium quality shrimp.

RINSING

Rinse shrimp thoroughly to remove dirt and bacteria, and allow blackspot solution to work effectively.

BLACKSPOT TREATMENT

Fill basket with no more than 30 lbs of shrimp, or half full, and use fresh seawater in a dip tank to manufacturer's specifications.

- Soak and agitate basket, making sure all shrimp contact solution.
 - 2 minutes for EverFresh® or Prawnfresh™
 - 1 – 2 minutes for sulfites
- Do NOT use Everfresh, Prawnfresh or sulfites in ice slush or brine tank.
- Mix a new batch after 500 pounds or 16 baskets of shrimp, or at least once a day.
- Do Not spread Everfresh, Prawnfresh or sulfites directly on shrimp.
- Do Not use TRI-POLYPHOSPHATES OR OTHER CHEMICALS.

Brine Freezing & Storage

Freeze shrimp as quickly as possible to reduce weight loss, salt intake, and drip loss upon thawing. Shrimp should freeze within 20 minutes if brine freezer system is working and loaded properly; longer freezing times will add salt to shrimp and pull water out.

MEASURE THE GALLON CAPACITY OF YOUR BRINE TANK

Mark the "fill line" (height) and measure it in inches, then measure the inside width and length of tank in inches:

$$\text{Gallon capacity} = (\text{Height} \times \text{Length} \times \text{Width}) \div 231$$

$$\text{Ex. } (36" \times 84" \times 36") \div 231 = 471 \text{ gallons}$$

CHARGE THE BRINE SYSTEM "BEFORE" EACH TRIP

Fill tank with clean water to the fill line you marked, add salt according to the table below.

Keep the temperature below 0°F (-18°C) – monitor with a thermometer

INGREDIENTS	PROPORTIONS	QUANTITY FOR 471 GALLON EXAMPLE
Food-grade salt	2.53 lb. per gallon	(2.53 x 471 gal.) = 1,192 lb.



FREEZING SHRIMP IN BAGS OR BOXES

Never load more than 15 pounds of shrimp to 100 gallons of brine; overloading system can cause soft centers and uneven freezing. Shrimp need to be fully frozen before removing from brine and storing, so keep track of the order bags/boxes are loaded in brine to know when to remove.

- Use smaller bags – 30# capacity – and do not force shrimp in; fill naturally and tie off
- Rectangular 4"-deep plastic mesh boxes – 20# max
- Do not overstuff bags or boxes – can result in poor brine circulation and slow freezing, causing hot spots and red shrimp

RECHARGE BRINE SYSTEM USING EITHER POUNDS OR REFRACTOMETER METHOD

Freezing shrimp decreases the brine concentration, so salt must be added to maintain correct salinity (23%) and proper freezing. Dissolve salt in small amount of warm water before adding to tank.

Pounds Method - add 28 pounds of salt after freezing every 1,000 pounds of shrimp

Refractometer Method – add salt when refractometer drops 2 percentage units from original reading of 23% according to instructions (recommended method)

